Articles Section

PRESCHOOL DIAGNOSTIC TREATMENT IN A GROUP SETTING

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The Preschool Diagnostic Speech/Language Group was established at the Glenrose Hospital to provide an extended period of clinical observation and diagnostic treatment for a heterogeneous group of nine children aged 30 to 48 months. A four week program was offered two and one half hours per day, four days per week. Additional diagnostic information was obtained through systematic observation of the children in a variety of situations and settings. Intervention strategies were implemented and each child's response was evaluated to determine learning rate, style and problems interfering with speech and language acquisition. Data obtained was used to determine treatment needs and placement referrals. A six month follow-up phone interview revealed that placement recommendations had been appropriate in the majority of cases.

Le groupe de diagnostic préscolaire de la parole/du langage a été créé à l'hôpital Glenrose afin d'assurer une periode prolongée d'observation clinique et de traitement diagnostique pour un groupe hétérogène de neuf enfants âgés de 30 à 48 mois. Un programme de quatre semaines a été offert, à raison de deux heures et demie par jour, quatre jours par semaine. D'autres renseignements diagnostiques ont été obtenus par une observation systématique des enfants dans diverses situations et divers ensembles de groupes. Des stratégies d'intervention ont été mises en application et la réponse de chaque enfant a été évaluée afin de déterminer le rythme et le style d'apprentissage ainsi que les problèmes entravant l'acquisition de la parole et du langage. Les données obtenues ont servi à déterminer la nature des besoins de traitement et les renseignements relatifs au placement. Après six mois, un interview téléphonique suivi a révélé que les recommandations de placement avaient été appropriées dans la majorité des cas.

Clinical observation would suggest that preschool children with significant communication problems may require an expanded period of assessment to allow adequate sampling and evaluation of their speech and language skills. Traditionally, children are assessed on an individual basis through a single session or a multidisciplinary clinic. The time spent in assessment may vary from half an hour to two days. This type of assessment provides an estimate of a child's level of functioning based on formal and informal tests and/or parental report. The results obtained, however, may not be representative of the child's ability as the sample of behaviour obtained is small when communication is limited to a one-to-one interchange. Similarly, from the management perspective there is limited opportunity

to examine intervention strategies that would assist in determining treatment alternatives. Consequently, decisions on placement and prognosis are difficult.

In an effort to circumvent the above constraints, the Preschool Diagnostic Speech/Language Group was established at the Glenrose Hospital as a pilot project. The purpose of this paper is to describe this program and discuss some of the benefits of this type of diagnostic treatment.

The program operated two and a half hours a day, four days a week, for a four week period. Three speech pathologists, one aide and nine children were involved in the program. The children ranged in age from 30 to 48 months and demonstrated a heterogeneity of communication skills. Estimated receptive language ages ranged from 18 to 36 months, while expressive skills ranged from non-verbal to a mean length of utterance of 4.4 morphemes. Further diagnostics were recommended by the referring clinicians in all cases.

To provide for small as well as large group experiences, the children were divided into three groups based on existing referral information. One group presented with language and behavioural problems, another with language and articulation problems and the third with low level functioning in language and other developmental areas.

In the first week of the program, additional diagnostic information was obtained from the following sources. A criterion-referenced probe was devised to obtain baseline data on vocabulary and semantic relations. The vocabulary portion tapped receptive and expressive use of word categories incorporated into program activities. The semantic content categories were similar to those described by Bloom and Lahey (1978). A limited spontaneous language sample was obtained to provide some indication of range and mean length of utterance, and use of syntactic forms. In addition, utterances were categorized according to primitive speech act types and pragmatic functions, as described in Dore (1975) and Halliday (1973). MacDonald's (1982) parent questionnaire, "Ecological Communication Opportunities", was used to probe parental information on the children's typical methods of communication in the home.

At this point, we had acquired a broader description of the children's communication difficulties. However, information was still needed on how the children's problems were reflected in day-to-day activities and how they coped with their communication difficulties. In other words, how did the children compensate for their problems and more importantly, how was language learning taking place?

To answer these questions, the following strategies were employed within the program format. First, to determine how the children routinely communicated we needed to systematically observe them in a natural environment. Such an environment was approximated by creating situations most common to young children (e.g., dressing, toileting, eating, indoor/outdoor play, and activities such as table-top crafts and music and games).

Second, to examine how the children managed their communication difficulties we needed to systematically observe their patterns of interactions, in spontaneous and demand situations. Physical

opportunities were built into the program for one-to-one and one-to-many interactions with peers and adults. Communication opportunities were provided by incorporating language themes dealing with topics we felt were typical of two- and three-year-olds. These were: all about me - parts of my body, my senses, what I wear; and extentions of me - my family, home and activities of daily living.

To answer the third question, the one most important to decisions about treatment needs, placement and prognosis, we needed to examine the children's learning rate and style by testing out various intervention strategies and their effects. A general intervention strategy applied to all the children was the provision of consistent management within an established routine. Consistency was important in reducing behavioural concerns and also in reducing the number of variables effective in producing change. An established routine was diagnostically useful in 3 ways:

1. it provided the opportunity to evaluate how quickly each child learned the routine,

2. it aided in determining the manner in which each child anticipated events within activities, and

3. it provided opportunities to systematically alter expected circumstances and observe whether a child generalized trained skills to spontaneous language. For example, if the activity was snack time and the language goal was expression of "all gone", the situation might have been altered by using an empty milk carton when pouring a drink for a child. Here a systematically planned discrepancy is introduced into an anticipated activity.

Intervention strategies were also individualized. Learning goals were set for each child based on information acquired in the first week of the program. Each child was then evaluated over the next three weeks with regard to his/her rate and style of learning. To facilitate learning, a cueing hierarchy was applied. By examining the frequency and type of cueing required, information was gained on areas of greatest difficulty; such as language comprehension and expression and the categories of semantics, pragmatics, syntax and phonology. Information was also acquired on the most successful sensory modalities and lingusitic variables for learning. (See Appendix I for specific program procedures.)

The learning environment was the final element to be examined. A continuum from structured to non-structured activities was applied within the framework of individual, small and large group situations. This further assisted in determining placement alternatives.

Program Evaluation

To determine whether accurate appraisals were made of the children's problems, an examination of the pre- and post- diagnoses and recommendations for placement was done for each group of three children. These data are presented in Table 1.

Table 1

The pre- and post- treatment diagnoses and recommendations for placement of the three groups of children.

Group	Pre-Diagnosis	Post-Diagnosis	Placement
A - 1	Mild receptive language delay Associated expressive difficulties	Mild auditory attention/ memory deficit affecting receptive abilities Normal expressive speech/ language	Periodic follow-up
A - 2	Articulation delay Possible expressive language delay	Moderate phonological disorder overlaying mild expressive developmental delay	Outpatient treatment
A - 3	Moderate-severe phonological deficit Moderate language deficit	Severe organic motor speech disorder overlaying moderate expressive language delay Mild receptive language delay	Multidisciplinary treatment program
B - 1	Articulation and language delay	Mild articulation/ expressive language delay Behavioural concerns	Home programming Periodic review
B - 2	Expressive language delay	Articulation and language skills within normal limits	Home programming Periodic review Regular playschool
B - 3	Significant speech and language delay	Child left program	
C - 1	Moderate-severe language delay	Severe receptive/ expressive language delay in two languages Suspected bilateral high frequency hearing loss	Structured group language program
C - 2	Moderate receptive/ expressive language delay	Severe auditory processing and visual-perceptual disorders overlaying moderate developmental language delay	Intensive, structured language/ behaviour program
C - 3	Moderate speech/ language delay	Overall developmental delay; moderate speech/ language delay	Intensive, structured language/ behaviour program

Note: Total number of children = 9

A close examination of the pre- and post- diagnoses revealed that in all cases, the severity of previously identified delays was expanded and clarified. In five out of eight cases, general statements regarding receptive and expressive language skills were further defined according to the nature of the delay and relative contributions of language related variables. Management recommendations included in final reports, reflected these individual differences. The relative significance of identified problem areas in each child's overall communication ability formed the basis for treatment suggestions. Placement recommendations additionally took into account each child's rate and style of learning. Placements ranged from limited follow-up in one case, to home programming or outpatient treatment in three cases and enrollment in structured language programs for the other four children.

A six month follow-up telephone survey was completed on each child to determine the appropriateness of placement. Four questions were asked in the interview and rated on a five point scale from very appropriate to not appropriate. Results are presented in Table 2. With regard to receptive and expressive communication skills, follow-up therapists indicated that placement decisions were at least adequate. In only one of eight cases was a child's behaviour considered a problem. In all cases, the children were reportedly making progress in appropriate treatment settings.

Table 2

Six month follow-up survey of perceived adequacy of placement based on four parameters.

Interview Parameters	Rating Scale				
	Not Appropriate 1	2	Adequate 3	4	Very Appropriate 5
Expressive speech/language skills			1 (12.5)	2 (25)	5 (62.5)
Receptive language skills			2 (25)	3 (37.5)	3 (37.5)
Behaviour		1 (12.5)		3 (37.5)	4 (50)
Treatment setting				1 (12.5)	7 (87.5)

Note: Total number of children (N = 8) with corresponding percentages in parentheses.

Clinical Implications

The primary benefit of the Preschool Diagnostic Speech/Language Group was that it provided a means of assessing a heterogeneous group of preschool children with significant communication difficulties on a short term, intensive basis. In all instances, the severity, nature and relative contribution of speech language problems affecting communication ability were further defined. In five out of eight cases the diagnosis was significantly altered.

The program format assisted in obtaining information regarding each of the three elements involved in assessment.

First, the description of each child's problem was expanded and included a definition of relative strengths and weaknesses. This was possible by systematically assessing the children in age-typical situations and in a variety of child and adult interactions, using realistic language topics. Factors which may cause and perpetuate the language disorder were also investigated. Environmental and cognitive factors were isolated by applying various intervention strategies within a range of structured and unstructured situations. With regard to management, learning rate and style were analyzed relative to environmental factors such as group size and degree of structure, linguistic variables and sensory modalities.

Additional benefits also arose out of this pilot project. First, the program served as a treatment readiness environment for parents and children. The parents became familiar with their child's needs through counselling, scheduled observation and home programming suggestions. Second, the children adjusted to separation from their parents and became accustomed to the behavioural and attentional demands of treatment. A third benefit was that sufficient time was available for consultation with audiologists, psychologists, occupational therapists and physio-therapists prior to making placement decisions. Finally, the program went one step further and provided a short term of therapy for children who in some cases might have otherwise been placed on long waiting lists prior to receiving services. Gains were made by all children, though not in all problem areas.

In summary, this program was effective in obtaining a more complete information base for making diagnoses and placement recommendations for eight preschool children. This model may be an effective means of evaluating the communicative needs of previously identified but incompletely diagnosed preschool children and determining appropriate treatment follow-up.

References:

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Halliday, M. Learning how to mean. In E. Lennenberg & E. Lennenberg (Eds.), Foundations of language development: A multidisciplinary approach. New York: Academic Press, 1973.

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APPENDIX I

Specific program procedures.

DIAGNOSTIC INFORMATION

1. Referral Report
2. Objective Testing
   - Formal Tests
   - Criterion Referenced Probe
   - Language Sample Analysis
   - Parent Questionnaire
3. Consultant Assessments
   - Audiology
   - Other
4. Systematic Observation
   - Variety of Contexts
   - Variable Group Size
   - Variable Structure
5. Systematic Evaluation
   - Learning Rate
   - Learning Style

DAILY SCHEDULE

Time	Activity
40 min.	Arrival Dressing Free Play
15 min.	Socialization Group (1)
25 min.	Language Groups (3)
25 min.	Indoor/Outdoor Play
20 min.	Snack
35 min.	Table Crafts Developmental Activities
25 min.	Music and Games
10 min.	Dressing for Home

LANGUAGE THEMES

WEEK 1 - "All About Me"

WEEK 2 - "My Home"

WEEK 3 - "Actions"

WEEK 4 - "Classifications"

INTERVENTION STRATEGIES AND CUEING HIERARCHY

General:	Consistent Expectations Selective Reinforcement Established Routine
Specific:	Individual Learning Goals Range of Group Structure Range of Group Size Cueing Hierarchy

Receptive Cues	Expressive Cues
Time Latency	Sentence Completion
Reduced Utterance	Phonetic Cue
Sequence Simplification	Associative-Semantic Class Cues
Added Information	
Auditory - Prosody Visual - Gesture Other	Sensory Cues Multiple Choice
Physical Prompt	Modelling/Imitation
Modelling/Imitation	
Physical Put-Through	